SEQUENCE LISTING

<110> Turner, C. Alexander Jr.
Hilbun, Erin
Potter, David

<120> Novel Human Mitochondrial Proteins and Polynucleotides Encoding the Same

<130> LEX-0182-USA

<150> US 60/207,933
<151> 2000-05-30

<160> 12

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<210> 1
<211> 1095
<212> DNA
<213> homo sapiens

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gccggcggcg gggaggccgg ggcctgcagg cccccggtac gacaagatcc ggactccggc 180
ccggactacg aggcgctgcc ggctggagcc actgtcacca cgcacatggt ggcaggcgcc 240
gtggcaggga tcctggagca ctgcgtgatg taccccatcg actgcgtcaa gacccggatg 300
cagagtctac agcctgaccc agctgcccgc tatcgcaatg tgttggaggc cctctggagg 360
attataagaa cggagggcct atggaggccc atgaggggggc tgaacgtcac agcaacaggc 420
gcagggcctg cccacgccct ttattttgcc tgctacgaaa agttaaaaaa gacattgagt 480
gatgtaatcc accctggggg caatagccat attgccaatg gtgcggccgg gtgtgtggca 540
acattacttc atgatgcagc catgaaccct gcggaagtgg tcaagcagag gatgcagatg 600
tacaactcac cataccaccg ggtgacagac tgtgtacggg cagtgtggca aaatgaaggg 660
gccggggcct tttaccgcag ctacaccacc cagctgacca tgaacgttcc tttccaagcc 720
attcacttca tgacctatga attcctgcag gagcacttta acccccagag acggtacaac 780
ccaagctccc acgtcctctc tggagcttgc gcaggagctg tagctgccgc agccacaacc 840
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attacaggac atatcacagg catggctagt gccttcagga cggtatatca agtaggtggg 960
gtgaccgcct atttccgagg ggtgcaggcc agagtaattt accagatccc ctccacagcc 1020
atcgcatggt ctgtgtatga gttcttcaaa tacctaatca ctaaaaggca agaagagtgg 1080
agggctggca agtga 1095

<210> 2
<211> 364
<212> PRT
<213> homo sapiens

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Ala Gly Pro Gly Arg Ser Pro Gly Glu Ser Ala Leu Leu Asp Gly Trp
20 25 30
Leu Gln Arg Gly Val Gly Arg Gly Ala Gly Gly Gly Glu Ala Gly Ala

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        35                  40                  45
Cys Arg Pro Pro Val Arg Gln Asp Pro Asp Ser Gly Pro Asp Tyr Glu
    50                  55                  60
Ala Leu Pro Ala Gly Ala Thr Val Thr Thr His Met Val Ala Gly Ala
65                  70                  75                  80
Val Ala Gly Ile Leu Glu His Cys Val Met Tyr Pro Ile Asp Cys Val
                85                  90                  95
Lys Thr Arg Met Gln Ser Leu Gln Pro Asp Pro Ala Ala Arg Tyr Arg
            100                 105                 110
Asn Val Leu Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp
        115                 120                 125
Arg Pro Met Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala
    130                 135                 140
His Ala Leu Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser
145                 150                 155                 160
Asp Val Ile His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala
                165                 170                 175
Gly Cys Val Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu
            180                 185                 190
Val Val Lys Gln Arg Met Gln Met Tyr Asn Ser Pro Tyr His Arg Val
        195                 200                 205
Thr Asp Cys Val Arg Ala Val Trp Gln Asn Glu Gly Ala Gly Ala Phe
    210                 215                 220
Tyr Arg Ser Tyr Thr Thr Gln Leu Thr Met Asn Val Pro Phe Gln Ala
225                 230                 235                 240
Ile His Phe Met Thr Tyr Glu Phe Leu Gln Glu His Phe Asn Pro Gln
                245                 250                 255
Arg Arg Tyr Asn Pro Ser Ser His Val Leu Ser Gly Ala Cys Ala Gly
            260                 265                 270
Ala Val Ala Ala Ala Ala Thr Thr Pro Leu Asp Val Cys Lys Thr Leu
        275                 280                 285
Leu Asn Thr Gln Glu Ser Leu Ala Leu Asn Ser His Ile Thr Gly His
    290                 295                 300
Ile Thr Gly Met Ala Ser Ala Phe Arg Thr Val Tyr Gln Val Gly Gly
305                 310                 315                 320
Val Thr Ala Tyr Phe Arg Gly Val Gln Ala Arg Val Ile Tyr Gln Ile
                325                 330                 335
Pro Ser Thr Ala Ile Ala Trp Ser Val Tyr Glu Phe Phe Lys Tyr Leu
            340                 345                 350
Ile Thr Lys Arg Gln Glu Glu Trp Arg Ala Gly Lys
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<210> 3
<211> 582
<212> DNA
<213> homo sapiens

<400> 3

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gccggcggcg gggaggccgg ggcctgcagg cccccggtac gacaagatcc ggactccggc     180
ccggactacg aggcgctgcc ggctggagcc actgtcacca cgcacatggt ggcaggcgcc     240
gtggcaggga tcctggagca ctgcgtgatg taccccatcg actgcgtcaa gacccggatg     300
cagagtctac agcctgaccc agctgcccgc tatcgcaatg tgttggaggc cctctggagg     360
attataagaa cggagggcct atggaggccc atgaggggggc tgaacgtcac agcaacaggc     420
gcagggcctg cccacgccct ttattttgcc tgctacgaaa agttaaaaaa gacattgagt     480
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acattacttc atgatgcagc catgaaccct gcggaaggct ga 582

<210> 4
<211> 193
<212> PRT
<213> homo sapiens

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20 25 30
Leu Gln Arg Gly Val Gly Arg Gly Ala Gly Gly Gly Glu Ala Gly Ala
35 40 45
Cys Arg Pro Pro Val Arg Gln Asp Pro Asp Ser Gly Pro Asp Tyr Glu
50 55 60
Ala Leu Pro Ala Gly Ala Thr Val Thr Thr His Met Val Ala Gly Ala
65 70 75 80
Val Ala Gly Ile Leu Glu His Cys Val Met Tyr Pro Ile Asp Cys Val
85 90 95
Lys Thr Arg Met Gln Ser Leu Gln Pro Asp Pro Ala Ala Arg Tyr Arg
100 105 110
Asn Val Leu Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp
115 120 125
Arg Pro Met Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala
130 135 140
His Ala Leu Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser
145 150 155 160
Asp Val Ile His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala
165 170 175
Gly Cys Val Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu
180 185 190
Gly

<210> 5
<211> 693
<212> DNA
<213> homo sapiens

<400> 5
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gccggcggcg gggaggccgg ggcctgcagg cccccggtac gacaagatcc ggactccggc 180
ccggactacg aggcgctgcc ggctggagcc actgtcacca cgcacatggt ggcaggcgcc 240
gtggcaggga tcctggagca ctgcgtgatg taccccatcg actgcgtcaa gacccggatg 300
cagagtctac agcctgaccc agctgcccgc tatcgcaatg tgttggaggc cctctggagg 360
attataagaa cggagggcct atggaggccc atgagggggc tgaacgtcac agcaacaggc 420
gcagggcctg cccacgccct ttattttgcc tgctacgaaa agttaaaaaa gacattgagt 480
gatgtaatcc accctggggg caatagccat attgccaatg gtgcggccgg gtgtgtggca 540
acattacttc atgatgcagc catgaaccct gcggaaggta atgattcctc aacctatcac 600
tctgtgggca gctgcacctg tatttcttta cagtttgcag aagaaagcac atcagttttg 660
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<210> 6

<211> 230
<212> PRT
<213> homo sapiens

<400> 6
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Ala Gly Pro Gly Arg Ser Pro Gly Glu Ser Ala Leu Leu Asp Gly Trp
            20   25   30
Leu Gln Arg Gly Val Gly Arg Gly Ala Gly Gly Gly Glu Ala Gly Ala
        35   40   45
Cys Arg Pro Pro Val Arg Gln Asp Pro Asp Ser Gly Pro Asp Tyr Glu
    50   55   60
Ala Leu Pro Ala Gly Ala Thr Val Thr Thr His Met Val Ala Gly Ala
65   70   75   80
Val Ala Gly Ile Leu Glu His Cys Val Met Tyr Pro Ile Asp Cys Val
                85   90   95
Lys Thr Arg Met Gln Ser Leu Gln Pro Asp Pro Ala Ala Arg Tyr Arg
            100   105   110
Asn Val Leu Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp
        115   120   125
Arg Pro Met Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala
    130   135   140
His Ala Leu Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser
145   150   155   160
Asp Val Ile His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala
                165   170   175
Gly Cys Val Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu
            180   185   190
Gly Asn Asp Ser Ser Thr Tyr His Ser Val Gly Ser Cys Thr Cys Ile
        195   200   205
Ser Leu Gln Phe Ala Glu Glu Ser Thr Ser Val Leu Val Gly Asn Ser
    210   215   220
Val Thr Leu Phe Tyr His
225   230

<210> 7
<211> 798
<212> DNA
<213> homo sapiens

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ggcgcagggc ctgcccacgc cctttatttt gcctgctacg aaaagttaaa aaagacattg 180
agtgatgtaa tccaccctgg gggcaatagc catattgcca atggtgcggc cgggtgtgtg 240
gcaacattac ttcatgatgc agccatgaac cctgcggaag tggtcaagca gaggatgcag 300
atgtacaact caccatacca ccgggtgaca gactgtgtac gggcagtgtg gcaaaatgaa 360
ggggccgggg ccttttaccg cagctacacc acccagctga ccatgaacgt tcctttccaa 420
gccattcact tcatgaccta tgaattcctg caggagcact ttaaccccca gagacggtac 480
aacccaagct cccacgtcct ctctggagct tgcgcaggag ctgtagctgc cgcagccaca 540
accccactgg acgtttgcaa aacactgctc aacacccagg agtccttggc tttgaactca 600
cacattacag gacatatcac aggcatggct agtgccttca ggacggtata tcaagtaggt 660
ggggtgaccg cctatttccg aggggtgcag gccagagtaa tttaccagat cccctccaca 720
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tggagggctg gcaagtga   798

<210> 8
<211> 265
<212> PRT
<213> homo sapiens

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            20   25   30
Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala His Ala Leu
        35   40   45
Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser Asp Val Ile
    50   55   60
His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala Gly Cys Val
65   70   75   80
Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu Val Val Lys
                85   90   95
Gln Arg Met Gln Met Tyr Asn Ser Pro Tyr His Arg Val Thr Asp Cys
            100   105   110
Val Arg Ala Val Trp Gln Asn Glu Gly Ala Gly Ala Phe Tyr Arg Ser
        115   120   125
Tyr Thr Thr Gln Leu Thr Met Asn Val Pro Phe Gln Ala Ile His Phe
    130   135   140
Met Thr Tyr Glu Phe Leu Gln Glu His Phe Asn Pro Gln Arg Arg Tyr
145   150   155   160
Asn Pro Ser Ser His Val Leu Ser Gly Ala Cys Ala Gly Ala Val Ala
                165   170   175
Ala Ala Ala Thr Thr Pro Leu Asp Val Cys Lys Thr Leu Leu Asn Thr
            180   185   190
Gln Glu Ser Leu Ala Leu Asn Ser His Ile Thr Gly His Ile Thr Gly
        195   200   205
Met Ala Ser Ala Phe Arg Thr Val Tyr Gln Val Gly Gly Val Thr Ala
    210   215   220
Tyr Phe Arg Gly Val Gln Ala Arg Val Ile Tyr Gln Ile Pro Ser Thr
225   230   235   240
Ala Ile Ala Trp Ser Val Tyr Glu Phe Phe Lys Tyr Leu Ile Thr Lys
                245   250   255
Arg Gln Glu Glu Trp Arg Ala Gly Lys
            260   265

<210> 9
<211> 285
<212> DNA
<213> homo sapiens

<400> 9
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ggcgcagggc ctgcccacgc cctttatttt gcctgctacg aaaagttaaa aaagacattg 180
agtgatgtaa tccaccctgg gggcaatagc catattgcca atggtgcggc cgggtgtgtg 240
gcaacattac ttcatgatgc agccatgaac cctgcggaag gctga   285

<210> 10
<211> 94
<212> PRT

<213> homo sapiens

<400> 10

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            20                  25                  30
Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala His Ala Leu
        35                  40                  45
Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser Asp Val Ile
    50                  55                  60
His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala Gly Cys Val
65                  70                  75                  80
Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu Gly
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<210> 11
<211> 396
<212> DNA
<213> homo sapiens

<400> 11

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ggcgcagggc ctgcccacgc cctttatttt gcctgctacg aaaagttaaa aaagacattg     180
agtgatgtaa tccaccctgg gggcaatagc catattgcca atggtgcggc cgggtgtgtg     240
gcaacattac ttcatgatgc agccatgaac cctgcggaag gtaatgattc ctcaacctat     300
cactctgtgg gcagctgcac ctgtatttct ttacagtttg cagaagaaag cacatcagtt     360
ttggtgggaa attctgttac cttgttttac cactag                               396
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<210> 12
<211> 131
<212> PRT
<213> homo sapiens

<400> 12

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Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp Arg Pro Met
            20                  25                  30
Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala His Ala Leu
        35                  40                  45
Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser Asp Val Ile
    50                  55                  60
His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala Gly Cys Val
65                  70                  75                  80
Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu Gly Asn Asp
                85                  90                  95
Ser Ser Thr Tyr His Ser Val Gly Ser Cys Thr Cys Ile Ser Leu Gln
            100                 105                 110
Phe Ala Glu Glu Ser Thr Ser Val Leu Val Gly Asn Ser Val Thr Leu
        115                 120                 125
Phe Tyr His
    130
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